

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/03/03359

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C21D1/19 C22C38/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C21D C22C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 527 276 A (NIPPON KOKAN KK) 17 February 1993 (1993-02-17) cited in the application ---	
A	US 6 080 247 A (ARNETT CHARLES R ET AL) 27 June 2000 (2000-06-27) ---	
A	US 5 393 358 A (SHIKANAI NOBUO ET AL) 28 February 1995 (1995-02-28) cited in the application ---	
A	US 5 108 518 A (FUKUI KIYOSHI ET AL) 28 April 1992 (1992-04-28) ---	-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

22 April 2004

03/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel: (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Mollet, G

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 01, 30 January 1998 (1998-01-30) & JP 09 249935 A (SUMITOMO METAL IND LTD), 22 September 1997 (1997-09-22) abstract -----	

INTERNATIONAL SEARCH REPORT

Final Application No

/FR 03/03359

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0527276	A	17-02-1993		AU 632187 B2 AU 6772090 A CA 2033267 A1 EP 0527276 A1 FI 906406 A GB 2244718 A JP 4228536 A US 5284529 A US 5403410 A US 5236521 A ZA 9106413 A ZA 9106416 A		17-12-1992 12-12-1991 07-12-1991 17-02-1993 07-12-1991 11-12-1991 18-08-1992 08-02-1994 04-04-1995 17-08-1993 29-04-1992 29-04-1992
US 6080247	A	27-06-2000		US 5865385 A AU 716971 B2 AU 6278798 A BR 9805899 A CA 2251106 A1 EP 0904154 A1 ID 19956 A PL 329371 A1 WO 9836838 A1 ZA 9801348 A		02-02-1999 09-03-2000 09-09-1998 25-04-2000 27-08-1998 31-03-1999 27-08-1998 29-03-1999 27-08-1998 24-08-1998
US 5393358	A	28-02-1995		JP 3089882 B2 JP 6256896 A US 5284529 A US 5403410 A US 5236521 A		18-09-2000 13-09-1994 08-02-1994 04-04-1995 17-08-1993
US 5108518	A	28-04-1992		JP 1975374 C JP 3188217 A JP 7005970 B DE 4040355 A1		27-09-1995 16-08-1991 25-01-1995 04-07-1991
JP 09249935	A	22-09-1997		NONE		